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AUTHOR Larner, Mary; And Others
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ABSTRACT

It is argued that health-oriented home visiting programs during pregnancy and the postpartum period can be an important element in a comprehensive maternal and child health package. This discussion, which draws on the experience of a group of demonstration home visiting programs sponsored by the Ford Foundation's Child Survival/Fair Start initiative, explores the dynamics that make home visiting programs work. The demonstration programs use laywomen to educate and support mothers in medically underserved communities. A conceptual model linking risk factors, intervention activities, and effects on mothers and children is proposed. The discussion then turns to the process of determining what goes on between home visitor and mother. Finally, the discussion presents an innovative study of program participation that uses home visitors' ratings of their relationships with clients. Preliminary results suggest that if home visitors feel that they are friends to their clients, the latter will be better participants than if the relationship is merely that of a social worker to a service recipient or a teacher to a student. The level of participation will be higher if the client is single, a first-time mother, and has low support from her family, but is not isolated. The questionnaire dealing with the client's level of program participation, and two figures are appended. (RH)

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INSIDE THE BLACK BOX: UNDERSTANDING HOME VISITING PROGRAMS

Mary Larner, Ph.D.
High/Scope Educational Research Foundation
600 North River Street
Ypsilanti, MI 48197
(313) 485-2000

Christine Nagy, Ph.D.
Department of Behavioral and Community Medicine
University of Alabama
Tuscaloosa, AL 35487
(205) 348-1351

Robert Halpern, Ph.D.
School of Social Work
University of Michigan
Ann Arbor, MI 48109
(313) 747-2532

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Introduction

Despite some uncertainty about how efficient home visiting programs are as a means of preventing costly problems of infant mortality, ill health and developmental delay, this type of intervention remains a popular choice (see the recent issue of Zero to Three). Both professional nurses and lay community workers reach out to pregnant women in high-risk communities and follow up with regular visits offering health and child development information, practical assistance, and personal support. As yet, however, we understand relatively little about what actually happens in home visiting programs, or about why they appear to work. What do home visitors do when they work with families? What are the presumed links between those program activities and hoped-for changes in maternal behavior and child outcomes?

In this paper we argue that health-oriented home visiting programs during pregnancy and the postpartum period can be an important element in a comprehensive maternal and child health package. The need for accessible, professional services is critical. These services are not replaced but are complemented by the work of a home visiting program. Compared with the physician, the home visitor works at a more immediate, psychosocial level, linking mothers to the formal service system, encouraging them to improve health habits and nutrition, and to provide both nurturance and stimulation to their infants. The home visitor captures the attention of the mother and wins her trust, creating a context that will support behavior change.

We are increasingly recognizing that psychosocial factors play an important role in shaping the behaviors that directly influence maternal and infant health -- the family's approach to diet and exercise, family planning, treatment of minor illnesses, use of health care services, and a broad swath of parenting behaviors. The everyday nature of these health-

supporting behaviors can make them difficult to influence -- as anyone who has tried to stop smoking can testify. When it is not simply a question of consenting to a single immunization, or of taking medication while symptoms persist, it is essential to gain the active participation of the "patient" in the treatment process. In the words of a public health nurse:

> "We need to influence these young women for 24 hours a day. We can't control their lives, so we must find a way to become a resource for them, to bring their thinking and values more in line with ours".

How can health education programs secure that participation? How do we motivate patients to follow recommendations that fly in the face of traditions, habits, or preferred life styles? The 1981 report of the Select Panel for the Promotion of Child Health suggested that efforts to bring about behavior change are more effective if they:

- o address the practical limitations which individuals face in trying to act in health-enhancing ways,
- o emphasize informed decision-making, not behavioral prescriptions, and
- o focus on the full cycle of behavior change: from assessment of causes, to analysis of factors promoting change, to reinforcement of change when it occurs.

Typically, all three of these elements are present in the work a home visitor does with each family she visits. Her visits to the home reveal the ways that specific aspects of the family's situation influence health and childrearing. Often, the visitor can help the family tackle pressing practical problems that stand in the way of their focusing on health. The visitor works toward informed decision-making through relaxed discussions over the kitchen table, as she explains why her recommendations are a good idea, explores the reasons behind any resistence, and works to persuade the young mother to at least give the new ideas a try. Most importantly, there is a continuity to the home visiting program that permits a personal relationship to develop, allowing the visitor to support the mother's

attempts at change first through suggestion and modelling, and later with encouragement and praise.

In this paper, we draw on the experience of a group of demonstration home visiting programs sponsored by the Ford Foundation's Child Survival/Fair Start initiative to explore the dynamics that make home visiting programs work. The demonstration programs all use lay women to educate, support, and assist mothers in medically underserved communities. One program serves migrant Mexican-American farmworkers in Florida, another works with Haitian immigrants and refugees in Fort Lauderdale, a third serves isolated families in Appalachia, and a fourth works with young black women in the poorest counties of Alabama.

In this paper, we draw on the implementation experiences of the programs to propose a conceptual model linking risk factors, intervention activities, and effects on mothers and children. Then we turn to the challenge of unpacking the "black box" of the treatment and determine what goes on between home visitor and mother. Finally, we present an innovative study of program participation, using ratings made by home visitors of their relationships with clients.

A conceptual model

To illustrate the role that a health-oriented home visiting program can play in preventing problems, Child Survival/Fair Start staff have developed the conceptual model shown in Figure 1. On the left are found the traditional risk indicators — characteristics of the commmunity and service system, and family demographics. Basic research evidence indicates that these risk conditions are often associated with deficits in child health and development.

This link is thought to be mediated to some degree by behaviors that lie within the mother's own control -- her use of available health care, her habits of health self-care and nutrition, and her skill and sensitivity as a parent. An interpersonal intervention (like home visiting or another health education program) hopes to change those behaviors in the mother, trusting that those maternal behavior changes will translate into improved child health and developmental outcomes. In Figure 1, the home visiting program is represented as a black box that interrupts the direct connection between risk conditions and unsupportive maternal behaviors.

What is it about home visiting that influences maternal behavior? Figure 2 illustrates our hypothesis about the mechanism set in motion by an effective program. Three basic elements are interwoven in the home visiting relationship: education (information-sharing, demonstration, role-modelling), social support (active listening, sharing personal experiences, creation of a trusting relationship), and practical assistance (linkage to formal services, help resolving crises, transportation or translation in emergencies). In combination, these three elements can increase the mother's knowledge of appropriate behaviors and increase her motivation to apply that knowledge in concrete actions.

The effect of these intervention activities on the mother's health behavior and parenting is indirect. The programs we are describing do not send public health nurses into the home to give immunizations or provide a parent aide to help the mother manage her childrearing role. Instead, the home visitor offers information, suggestions and advice to the mother and works hard to win her over, hoping to convince her to change her own behavior. In some cases, the information itself was lacking (a Haitian mother may not know how to prepare formula when the label is printed in English). More often, the home visitor finds that other issues are involved

for the mother. For example, a supervisor noted that teens may know breastmilk is health for the baby yet resist breastfeeding:

> "The girls say 'ooh it looks so ugly, pulling out that breast and feeding that baby in front of everybody', or 'what about my boyfriend, I don't want no sagging breasts'. That woman is not going to breastfeed if she does not feel good about herself as a woman. We've got to get inside her mind and unlock those notions."

Home visiting relationships are flexible and personal to motivate as well as educate the mothers who participate.

We have come to believe that the power of the home visiting approach comes from the way that social support and practical assistance are used to engage the mother's attention, to give her a stake in the visit and in the relationship she develops with the home visitor. When the visitor demonstrates her concern for the family by offering to help resolve <u>their</u> problems and by listening and talking about what is important to them, she is laying a foundation of confidence, trust, and involvement that will enhance the impact of the educational messages she is interested in getting across to the mother. Support and assistance are tools that the home visitor uses in creating rapport and trust with the mothers. Once a visitor becomes a trusted friend, her recommendations have weight.

For example, a program working with urban Hispanic families finds that for their families, providing practical assistance is a key way of establishing trust.

> Sometimes it takes a very long time for them to share anything, and it may not be something personal like a boyfriend that breaks the ice. It may be the food stamps. These are people that have very real needs for very basic things, like housing, medical care. And lots of these people have been led down the primrose path by other folks, have been promised things that have not been delivered, so they may be frustrated by agencies. Concrete things can be very important, they can be a way of testing the home visitor: "can this person deliver? can she really help me? how far will she go?"

In contrast, a home visitor who works primarily with pregnant adolescents in rural Tennessee reports that her willingness to listen to the young women's problems usually opens the door for frank and open exchange:

> The relationship gets established slow, the girls are quiet and watchful at first, not very talkative. It's not as much resistance, though, as it is waiting to see how much they can tell you, whether you're really going to keep your mouth closed about what they tell you... Usually the shift comes because they'll have a problem and they'll talk about it. It often happens that a boyfriend will be the one that breaks the ice, or they might want to talk to you about sex... When they ask you that kind of a question you didn't expect, you know that you've reached another level. Then the conversations between you are different — after that you have to hear the personal things first, before you get to the teaching. Before, they were quiet even when they let you do your teaching, you didn't know how much they heard. This way, at least you've got their interest, there's an exchange going on.

The payoff for the program comes in the quality of the attention that the mother gives to the educational messages that the home visitor means to convey. When a home visitor has not been able to establish a relaxed rapport with a mother, the educational aspect of her visits will fall flat. For example, consider this excerpt from an observation of a visit with a mother who is not psychologically participating:

HV: How often do you feed her within 24 hours?

Mother: Anytime she wakes up.

HV: Sometimes she may wake up and not want her bottle.

Mother: That ain't right. I know she wants her bottle.

HV: Even if you hold her and play with her that's not enough?

Mother: No, she wants her bottle.

HV: Jean, getting back to the cereal. Now are you going to just try the cereal? No other things like vegetables or fruits.

Mother: I'm going to give her everything.

HV: No Jean, you try just the cereal. One thing at a time.

Mother: Look, it takes more to feed some babies than others.

As another visitor succinctly put it: "In order to help people, you've got to be listened to, and if I turn you off you haven't heard a word I've said anyway. We're just going through the motions". It is harder to caputre the flavor of a successful home visit, but we would argue that the most effective teaching takes place when the mother is an active participant, engaged because she is invested in her relationship with the home visitor.

Getting inside: Influences on participation in one program

The Rural Alabama Pregnancy and Infant Health Program (RAPIH), located in three of west central Alabama's poorest counties (Greene, Hale, and Sumter), relies on lay community workers to provide outreach, education, and social support to low income families. This home visiting program's primary focus has been on improving prenatal practices, birth outcomes, and child health and development among the area's black population.

Initiated in the fall of 1983, the program began enrolling subjects during the spring of 1984. Subjects enrolled in the program are followed prenatally and through the first two years of the child's life with a series of interviews, review of medical records, assessments of the home environment and of child development. The initial focus was on primiparous women, but later expanded to include multiparous women.

Since the program is administered through West Alabama Health Services, which is a federally-funded Rural Health Initiative clinic, most of the women are their patients. To give you some background information on the program participants, they are an average of 22 years of age (ranging from 13 to 38), of which 37.3% are teenagers. Most of the women (87.9%) have completed high school. Although this is the first pregnancy for 63% of the women, only 25% are married and 17% are employed.

The intervention consists of biweekly home visits prenatally and through the child's first six months of life. During the second six months, visits occur monthly. Visits are then scheduled every six weeks through the child's second birthday. Early on, the home visitor's role was that of an educator. However, as time passed, her role grew to include the provision of social support to many of her clients.

In meetings with the home visitors, it was interesting to listen to them talk about what had happened during their visits and how they would describe one woman as a "good" client and another as a "poor" client. With these discussions in mind, we felt that a number of factors were working together to affect a client's level of participation. Since our goal was to try and help these woman as much as possible, we felt that we could better accomplish this goal if we could identify specific client characteristics that promoted participation.

In order to assess level of participation in the home visiting program, a 9-item, 7-point rating scale was developed. Each item highlighted an aspect of the visit. Questions included: How often does she ask questions about the lesson? How often does she share personal problems with you? How often does she let you know when she is not going to be home for a visit? For each of the 9 items, a higher score reflected a higher level of participation. Client characteristics thought to impact on level of participation were drawn from interview data collected at enrollment in the program. These included age, education, marital status, employment status, parity, household composition, and two measures of social support. One measure reflects the interviewer's perceptions of whether the client was isolated or not, while the other reflects the client's use of family members in dealing with problems related to money, parents, health and pregnancy. Home visitors were also asked to identify the type of relationship they felt

they had with the client (social worker, teacher, or friend).

During a regular weekly meeting in March, 1987, the nine home visitors were informed about the study and asked to complete a level of participation rating scale on each of their clients. Since there was insufficient time to complete all the forms, they were returned the following week during their next meeting. Of the 100 rating scales distributed to the home visitors, usable data were received on 72 clients.

These clients ranged in age from 13 to 38 with a mean of 21 years, with 11.75 years of education, 58% were primips, 28% were married and 17% were employed. Household composition ranged from 2 to 10 members, with a median of 5. Most households had at least 2 individuals in addition to the client who were over the age of 17.

With respect to they type of relationship the home visitors had with their clients, home visitors were a friend to 43.1% of their clients, a social worker to 29.2%, and a teacher to 27.8%. This varied type of relationship or role the home visitor played was also reflected in the level of participation rating scores. Since each of the 9 items was rated on a 7-point scale, the possible range of scores was 9 to 63 (the higher the score, the better the level of participation).

Level of participation scores ranged from 10 to 58, with a mean of 38.46 and a standard deviation of 11.08. A factor analysis performed on the rating scales identified two factors; one reflecting social support and another reflecting more "teaching" aspects of the home visits (see Table 1). Cronbach's alpha provided a reliability coefficient of .88 for the 9-item scale.

In order to identify specific characteristics that impact on level of participation, a stepwise multiple regression was performed. The predictor

variables of age, marital status, parity, social support measures -- isolation and family support, and home visitor relationship were entered into the model. The multiple correlation coefficient between the six predictor variables and level of participation was .67. The strongest predictor variable entering the equation was the home visitor relationship, followed by marital status, parity, isolation, family support, and age (see table 2). Although each of the six predictor variables contributed significantly to the multiple R, the contributions of family support and age were no longer significant in the final coefficient. (Contact the second author for details on further regression analyses conducted with these data).

These preliminary results suggest that if a home visitor feels she is a friend to her client, the latter will be a better participant than if the relationship is that of a social worker or a teacher. Level of participation, however, will be better if the client is single, a first-time mother, and not isolated but having low support from her family.

Two areas that the home visiting program is attempting to impact are attendance at prenatal medical appointments and later with respect to infant immunizations. To examine how level of participation influenced positive outcomes, the participation measure was subdivided into three levels: high (scores between 44 and 58), medium (32 to 43) and low(10 to 33). With this breakdown, there were 21 in the low group, 24 in the middle group, and 27 in the high group. With respect to the number of prenatal medical appointments that were kept, the high participation group completed 9 appointments compared to 8 for each of the other two groups. Comparing the participation groups on infant immunizations indicated that only 49 of the 72 infants received their first immunization prior to three months of age. This reflects the fact that immunizations are not a major priority of families in

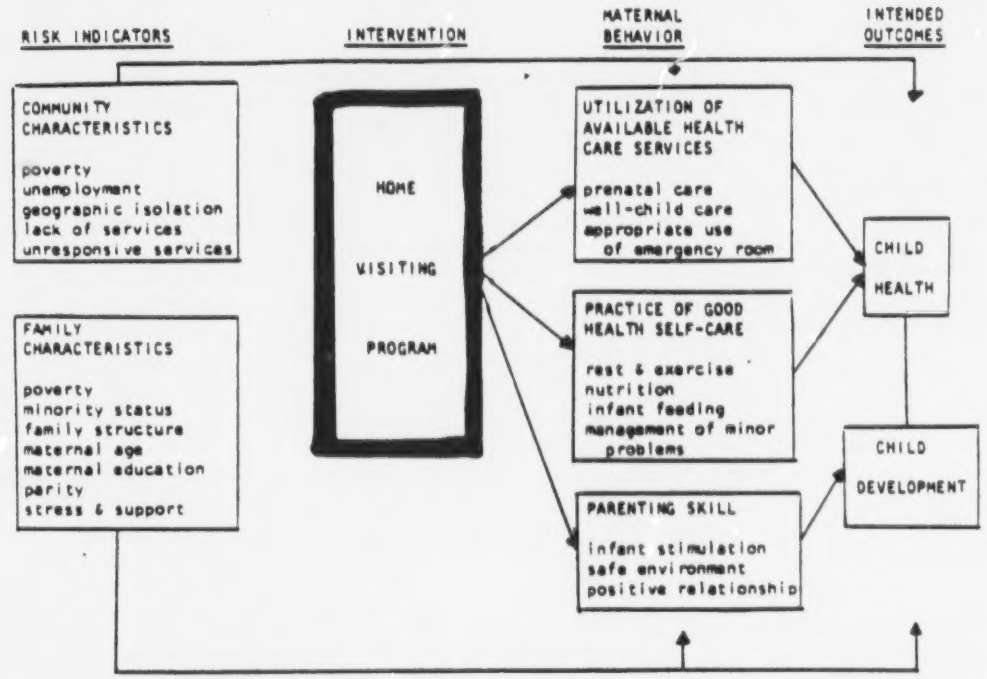
this three-county area. Participation was related to immunization status: 10 (48%) of the low group were immunized, 19 (79%) of the middle group and 20 (74%) of the high group.

It would appear that the level of participation rating scale provides a fairly good indication as to whether a client is a "good" or "poor" program participant. Based on these findings, participation is highest among clients whose home visitor feels she plays the role of friend, where the young mother is single, a first-time mother, somewhat older, and is not isolated but has a low level of support from her family. The RAPIH program seems to work best when the home visitor and the client establish a special type of relationship.

In order to promote participation, it is essential that home visitors and program participants be "well matched" on personality variables so that they may be more than just acquaintances. A vital component of the home visitor training program is therefore a section devoted to relationship-building. Regular in-service programs should also serve to reinforce this aspect of the home visitor's role.

Figure 1

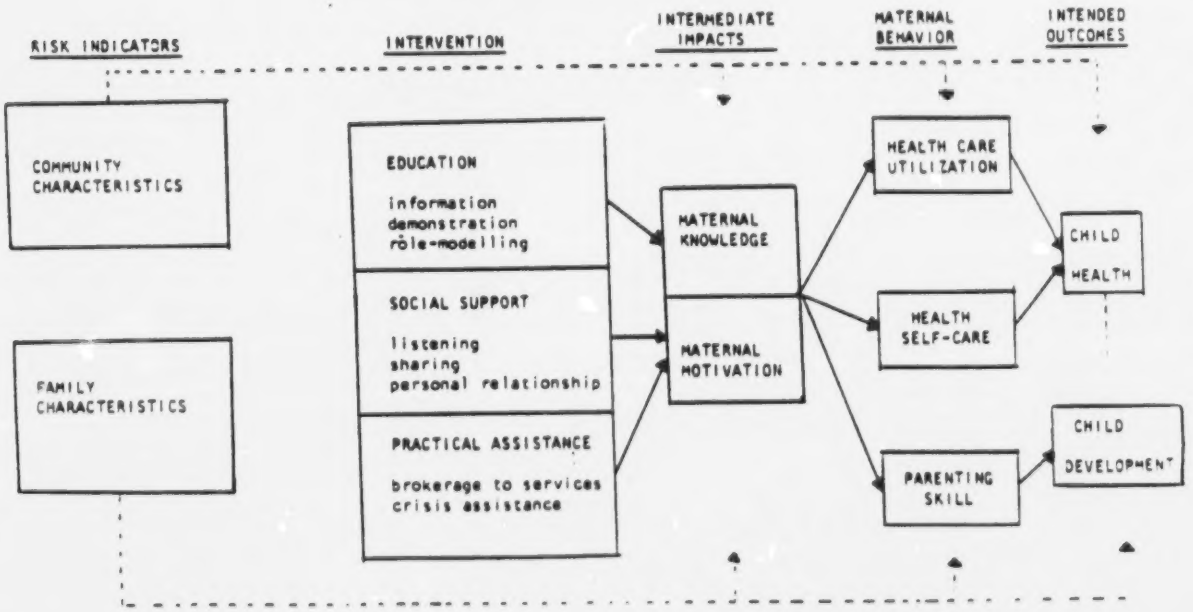
CONCEPTUAL MODEL
for
HEALTH-ORIENTED HOME VISITING PROGRAMS



Based on a model prepared by Marge Koblinsky of the Ford Foundation.

Figure 2

AMPLIFIED CONCEPTUAL MODEL
for
HEALTH-ORIENTED HOME VISITING PROGRAMS



The following questions deal with your client's level of participation in the RAPIH program. Please circle the number that best describes her behavior.

1. On a scale of 1 to 7, how would you rate this client's <u>overall level</u> of participation in the RAPIH home visiting program?

Excellent 7 6 Good 5 4 Poor 3 2 Needs improvement 1

2. How often does she really <u>listen</u> to what you say during the lesson?

none of the time 1 2 a little 3 4 some 5 6 all of the time 7

3. How often does she <u>ask questions</u> about the lesson?

all of the time 7 6 some 5 4 a little 3 2 none of the time 1

4. How often does she <u>understand</u> the lesson? (Based on her answering questions or something that she said to show you that she understood)

none of the time 1 2 a little 3 4 some 5 6 all of the time 7

5. How often does she <u>ask you for advice</u> that is not related to the lesson you are teaching?

all of the time 7 6 some 5 4 a little 3 2 none of the time 1

6. How often does she <u>follow your suggestions</u> in terms of what has been taught in the lesson?

none of the time 1 2 a little 3 4 some 5 6 all of the time 7

7. How often does she <u>share</u> personal problems with you?

all of the time 7 6 some 5 4 a little 3 2 none of the time 1

8. How often is she <u>at home</u> for her scheduled home visits?

none of the time 1 2 a little 3 4 some 5 6 all of the time 7

9. How often does she <u>let you know</u> when she is not going to be home for a visit?

all of the time 7 6 5 4 3 2 none of the time 1

TABLE 1: LEVEL OF PARTICIPATION FACTOR ANALYSIS

Factor 1 : Support		Factor 2 : Teaching	
ask advise	.86872	let you know	.88019
ask questions	.86633	at home	.86865
share problems	.80687	overall rating	.73416
suggestions	.69503	listen	.71607
*understand	.56367	understand	.46230

TABLE 2: VARIABLES IN THE REGRESSION EQUATION

Variable	Beta	T	Sig T
relationship	.5253	4.95	.000
marital status	.3150	2.74	.008
parity	-.3363	-2.68	.009
isolation	.2780	2.42	.019
family support	-.2190	-1.89	.064
age	.2802	1.87	.068

Multiple R = .67
R Square = .45
Adj R Square .38
N = 72

Child Survival/Fair Start Initiative

Home Visiting Program Addresses and Contact Persons

Fair Start Program

Beverly Hunt
Community Health of South Dade
Martin Luther King Clinic
810 West Mowry Street
Homestead, Florida 33030
(305) 248-4334

Parent Child Program

Emily Vargas Adams
CEDEN
1631 East Second Street
Austin, Texas 78702
(512) 477-9017

Maternal Infant Health Outreach Worker Project

Barbara Clinton
Center for Health Services
Vanderbilt University Medical Center
Nashville, Tennessee 37232
(615) 322-4773

Rural Alabama Pregnancy and Infant Health Project

Christine Nagy
Department of Behavioral and Community Medicine
University of Alabama
Tuscaloosa, Alabama 35486
(205) 348-1351

Haitian Perinatal Intervention Project

Susan Widmayer
Broward General Medical Center
1600 South Andrews Avenue
Fort Lauderdale, Florida 33316
(305) 463-3131

Cross-Project Evaluation Team

Mary Larner
High/Scope Educational Research Foundation
600 North River Street
Ypsilanti, Michigan 48197
(313) 485-2000

Robert Halpern
1065 Frieze Building
School of Social Work
University of Michigan
Ann Arbor, Michigan 48109
(313) 747-2532